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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,237	09/16/2003	Robert G. Dandrea	DIVA/144CIP1CI	3754

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PATTERSON & SHERIDAN, LLP/
SEDNA PATENT SERVICES, LLC
595 SHREWSBURY AVENUE
SUITE 100
SHREWSBURY, NJ 07702

EXAMINER

DOAN, DUC T

ART UNIT PAPER NUMBER

2188

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/663,237

Applicant(s)

DANDREA ET AL.

Examiner

Duc T. Doan

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAIL ACTION

Status of Claims

Response to Amendment

Claims 1-26 were pending in this application. In response to the last Office Action, Claim 1 was amended. As a result, claims 1-6 are remain pending in this application.

Claims 1-6 are rejected.

All rejections and objections not explicitly repeated below are withdrawn.

Applicant's arguments filed 11/10/05 have been fully considered but they are not persuasive. Therefore, the rejections from the previous office action are respectfully maintained, with changes as needed to address the amendments.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 rejected under 35 U.S.C. 103(a) as being unpatentable over Yao et al (US 6021464) and further in view of Demoney (US 6721789).

As for claim 1, Yao describes a method of accessing data stored in a disk array as a plurality of extents striped across the disks forming the disk array, the method comprising: receiving a new user access request; assigning the new user access request to a disk d of said disk array (Yao's column 2, lines 11-23); determining when the new user access request will be processed by examining extent size for requested data stored on disk d (Yao's column 3 lines 60 to column 4, lines 2), wherein if the new user access request will be processed within a predefined period of time, placing the new user access request into a new user queue for disk d (Yao's column 5, lines 10-123); otherwise, assigning the new user access request to another disk of said disk array (Yao's column 5, lines 23-28). Yao further describes that the admission control method is used in a disk array system in which plurality of disk devices are provided to realize sufficient transfer capability for a storage device (Yao's column 1 lines 14-19), the data stream is broken into segments (corresponds to the claim's stripe of data) and stored in N disk devices in a sequential manner (Yao's column 1 lines 50-55). Thus Yao clearly teaches the admission control method for disks using in for example a disk array system. Yao does not specifically use the word disk array system or RAID. However Demoney clearly describes a multimedia server using a RAID system to store blocks of data across multiple hard disk units. It would have been obvious to one of ordinary skill in the art at the time of invention to include a RAID disk array storage as suggested by Demoney in Yao's system to increase storage and bandwidth for simultaneous users of a multimedia server (Demoney's column 2, lines 15-24).

As for claim 2, the claim recites wherein said another disk is up to three disks distant from disk d. Yao describes of selecting the "another disk" as a device Dt of a group of an

Art Unit: 2188

arbitrary number of disks (Yao's column 5, lines 18-25). The "another disk" can be one, two, or three disks away from the originally selected disk.

Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Yao et al (US 6021464), Demoney (US 6721789) as applied to claim 1, and further in view of Vaitzblit et al (US 5528513).

As for claim 3, the claim recites wherein, if said new user access request cannot be assigned to another disk, waiting a predefined period of time; and assigning the new user access request to disk d. Yao describes a procedure to scan disks to select an "another disk"; if all disks are busy, the procedure scans back to the original disk (Fig 2, column 4, line 40-60; column 5, lines 18-28). Yao does not describe of a predefined period of time. However Vaitzblit describes a scheduler where tasks are groups in to classes. Vaitzblit describes each task is guaranteed with a minimum time slot (Vaitzblit's column 3, lines 27-43), therefore it takes a minimum amount of time for a task to become not busy. It would have been obvious to one of ordinary skill in the art at the time of invention to include the scheduler as suggested by Vaitzblit in Yao's system to gurarantee a minimum CPU processing quantum for tasks in the general purpose class (Vaitzblit's column 3, lines 32-38).

As for claim 4, it rejected based on the same rationale as in claim 1.

As for claim 5, it rejected based on the same rationale as in claim 2.

As for claim 6, it rejected based on the same rationale as in claim 3.

Response to Arguments

Applicant's arguments in response to the last office action has been fully considered but they are not persuasive. Examiner respectfully traverses Applicant's arguments for the following reasons:

As to the remarks on pages 5-6 concerning the claims 1,2, as follows:

a) Yao's reference taught of writing segments of data across disks. Segments written to disk and assigned to disks are distributed in a manner to guarantee the disk write deadlines for write requests in each disk (Yao's column 5 lines 60-68 describes disk device Dt is chosen for data request Do). The host can readily access written data at these distributed locations (column 6 lines 7-17 describes host access data in disk Dt). This teaching meet the claim's 1 limitation of "determining extent size for requested data stored on disk d.....". Applicant argues "...temporary storage.." about the re-allocation step taught by Yao. Firstly, Examiner cannot find the merit of this argument in the limitation of claim 1. Secondly, Yao's column 5 lines 63-67 describe "...it **may be** required ...". Thus Yao clearly describes an **optional enhancement** of subsequently re-allocated data blocks in disks.

b) For the applicant's argues "neither reference addresses **"strip"** data ". Please see the responses as above. Examiner further note that the word **"striped"** cannot be found anywhere in the specification except in the claims language.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ma et al (US 5926649) discusses the well know techniques of tripping data across RAID disk array system (Back ground of invention, columns 5,6) and using a zone as an extent to strip data across disks in RAID system.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Applicant's amendment filed 8/18/03 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

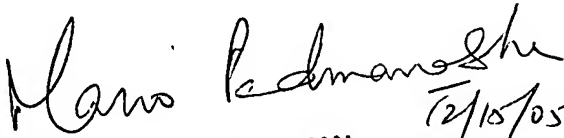
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

When responding to the office action, Applicant is advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Doan whose telephone number is 571-272-4171. The examiner can normally be reached on M-F 8:00 AM 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 571-272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


12/15/05
MANO PADMANABHAN
SUPERVISORY PATENT EXAMINER